CLAIMS

1. A heat-storing medium for a low-temperature range, composed of a set (22) of pourable bodies, wherein the bodies are gastight sealed hollow bodies (30) and each hollow body (30) contains a fill (34) of a low-boiling gas as a storage medium,

   characterized in that

   the hollow body wall (32) is made of metal.

2. The heat-storing medium according to claim 1, characterized in that the hollow body wall (32) is made of copper.

3. The heat-storing medium according to claim 1 or 2, characterized in that the material and the wall thickness of the hollow body wall (32) are selected such that the thermal penetration depth equals at least once the wall thickness.

4. The heat-storing medium according to one of claims 1-3, characterized in that the storing medium is a fill (34) of helium.

5. The heat-storing medium according to claim 4, characterized in that the helium fill (34) has a pressure of more than 0.5 bar at a temperature of 4 K.

6. The heat-storing medium according to claim 4 or 5, characterized in that the helium fill (34) has a pressure of approximately 200 bar at room temperature.

7. The heat-storing medium according to one of claims 1-6, characterized in that the wall thickness of the hollow body wall (32) is smaller than 1.0 mm.

8. The heat-storing medium according to one of claims 1-7, characterized in that the hollow body (30) is of approximately spherical configuration.

9. The heat-storing medium according to claim 8, characterized in that the hollow body (30) has a diameter of less than 3.0 mm.

10. The heat-storing medium for a low-temperature range, comprising a set (22) of pourable bodies, wherein the bodies are gastight sealed hollow bodies (30) and each hollow body (30) contains a fill (34) of a low-boiling gas as a storing medium, characterized in that the hollow body wall (32) is made of ceramic material.

11. A regenerator (14) for a low-temperature refrigerator (10), comprising a housing (24) filled with the heat-storing medium (22) according to one of claims 1-10.

12. A low-temperature refrigerator (10) comprising a regenerator (14) according to claim 11, characterized by its configuration as a Gifford-McMahon, Stirling or pulse tube refrigerator, wherein helium gas is used as a working fluid.